

Specification

Please replace the Abstract with the following replacement Abstract:

A method of reducing the amount of carbon monoxide in process fuel gas in a ~~water-gas shift-converter feed stream for a fuel cell~~. The method includes introducing a hydrocarbon feed stream into a primary reactor and reacting the hydrocarbon feed stream in effective contact with a reforming catalyst forming primary reactor products containing hydrogen, carbon monoxide, carbon dioxide, and methane; placing a high activity water gas shift catalyst system into a water gas shift converter, and passing the process fuel gas through the water gas shift converter in effective contact with the high activity water gas shift catalyst system and converting a portion of the carbon monoxide in the process fuel gas into carbon dioxide and hydrogen by a water gas shift reaction introducing the primary reactor products into the water gas shift converter in effective contact with the high activity water gas shift catalyst system, and reacting the carbon monoxide and water to form carbon dioxide and hydrogen using a water gas shift reaction forming the feed stream for the fuel cell; and introducing the feed stream into the fuel cell. The high water gas shift catalyst system includes a noble metal, a support comprising a mixed metal oxide of cerium oxide and at least one of zirconium oxide or lanthanum oxide. A promoter of yttrium, an alkali metal, or alkaline earth metal can be included. A support dopant can also be included.